SANTA CRUZ BIOTECHNOLOGY, INC.

caspase-6 p10 (H-12): sc-377393

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

A unique family of cysteine proteases has been described that differs in sequence, structure and substrate specificity from any previously described protease family. This family, CED-3/caspase-1, is comprised of caspase-1, caspase-2, caspase-3, caspase-4, caspase-6, caspase-7 (also designated Mch3, ICE-LAP3 or CMH-1), caspase-9 and caspase-10. CED-3/caspase-1 family members function as key components of the apoptotic machinery and act to destroy specific target proteins which are critical to cellular longevity. Poly(ADP-ribose) polymerase plays an integral role in surveying for DNA mutations and double strand breaks. Caspase-3, caspase-7 and caspase-9, but not caspase-1, have been shown to cleave the nuclear protein PARP into an apoptotic fragment. Caspase-6, but not caspase-3, has been shown to cleave the nuclear lamins which are critical to maintaining the integrity of the nuclear envelope and cellular morphology. Caspase-10 has been shown to activate caspase-3 and caspase-7 in response to apoptotic stimuli. Human caspase-6 is expressed as two isoforms, one of which is designated caspase-6 p10 and may be phosphorylated on Ser 257.

REFERENCE

1. Lindahl, T., et al. 1995. Post-translational modification of poly (ADP-ribose) polymerase induced by DNA strand breaks. Trends Biochem. Sci. 20: 405-411.
2. Duan, H., et al. 1996. ICE-LAP3, a novel mammalian homologue of the *Caenorhabditis elegans* cell death protein CED-3 is activated during FAS- and tumor necrosis factor-induced apoptosis. J. Biol. Chem. 271: 1621-1625.

CHROMOSOMAL LOCATION

Genetic locus: CASP6 (human) mapping to 4q25; Casp6 (mouse) mapping to 3 G3.

SOURCE

caspase-6 p10 (H-12) is a mouse monoclonal antibody raised against amino acids 194-253 of caspase-6 p10 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

caspase-6 p10 (H-12) is available conjugated to agarose (sc-377393 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377393 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377393 PE), fluorescein (sc-377393 FITC), Alexa Fluor® 488 (sc-377393 AF488), Alexa Fluor® 546 (sc-377393 AF546), Alexa Fluor® 594 (sc-377393 AF594) or Alexa Fluor® 647 (sc-377393 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377393 AF680) or Alexa Fluor® 790 (sc-377393 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

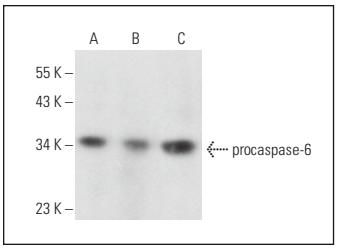
caspase-6 p10 (H-12) is recommended for detection of p10 subunit and precursor of caspase-6 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for caspase-6 siRNA (h): sc-72802, caspase-6 siRNA (m): sc-72803, caspase-6 shRNA Plasmid (h): sc-72802-SH, caspase-6 shRNA Plasmid (m): sc-72803-SH, caspase-6 shRNA (h) Lentiviral Particles: sc-72802-V and caspase-6 shRNA (m) Lentiviral Particles: sc-72803-V.

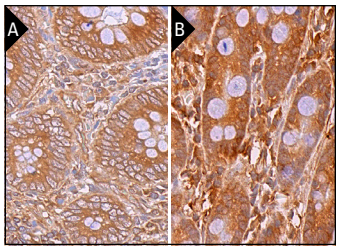
Molecular Weight of caspase-6 p10: 34 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, Hep G2 cell lysate: sc-2227 or Jurkat whole cell lysate: sc-2204.

DATA



caspase-6 (H-12): sc-377393. Western blot analysis of procaspase-6 expression in A-431 (**A**), Hep G2 (**B**) and Jurkat (**C**) whole cell lysates.



caspase-6 p10 (H-12): sc-377393. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells and lymphoid cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Kim, S.B., et al. 2017. Caspase-8 controls the secretion of inflammatory lysyl-tRNA synthetase in exosomes from cancer cells. J. Cell Biol. 216: 2201-2216.
2. Aslan, A., et al. 2021. Royal jelly abrogates flouride-induced oxidative damage in rat heart tissue by activating of the Nrf-2/NFκB and Bcl-2/bax pathway. Toxicol. Mech. Methods 31: 644-654.
3. Aslan, A., et al. 2022. Royal jelly regulates the caspase, Bax and COX-2, TNF-α protein pathways in the fluoride exposed lung damage in rats. Tissue Cell 76: 101754.
4. Aslan, A., et al. 2022. Protective effect of royal jelly on fluoride-induced nephrotoxicity in rats via the some protein biomarkers signalling pathways: a new approach for kidney damage. Biomarkers 27: 637-647.

RESEARCH USE

For research use only, not for use in diagnostic procedures.